

APPENDIX 1

Foraminiferal data of the investigated samples

Sample		LITHOLOGY**	Percentage of planktonic foraminifera	Percentage of globorotaliids in planktonic foraminifera	Globorotaliids counts				<i>Globigerina bulloides</i> stable isotopes: Gliwice 19 and Gliwice 21 (after Durakiewicz et al., 1997; the others after Gonera and Bukowski, 2012)		
					number of counted tests	percentage of morphospecies					
Boreholes*	Core depth [m]		after Gonera (2001)			<i>G. bykovae</i>	<i>G. minoritesta</i>	<i>J. mayeri</i>	<i>J. transsylvanica</i>	$\delta^{18}\text{O}$	$\delta^{13}\text{C}$
GLIWICE 17	168.8	T	42.1	47.1	245	91.8		8.2			
	173.0	T	71.0	56.9	268	85.1		14.9			
	175.2	T	46.6	53.2	167	100.0			-0.43	0.74	
	177.6	T	57.4	20.6	338	100.0			-0.69	0.13	
	183.0	T	71.9	64.6	147	97.3		2.7	0.83	1.63	
	187.5	T	53.7	55.0	320			100.0	0.40	0.45	
	190.3	T	61.0	37.8	215			100.0	1.09	1.02	
	194.5	T	62.9	57.0	317			100.0	0.49	0.85	
	202.5	S	62.0	57.9	332			100.0	0.33	0.75	
	204.8	T	71.7	39.2	364			100.0	-0.64	0.72	
	210.0	T	73.7	39.6	306			100.0			
	214.5	T	48.1	67.9	330	99.7		0.3			
	217.0	T	37.7	67.9	322	98.4		1.6		-1.00	0.84
	220.0	S	54.0	33.1	282	100.0					
	222.3	S	53.3	52.2	419	62.3		37.7			
	225.5	S	49.2	79.2	312	94.2		5.8		-0.82	0.64
	230.0	S	53.0	60.7	299	73.9		26.1		-0.78	0.20
	235.0	S	69.6	49.4	295	82.0		18.0		-0.34	0.31
	239.0	S	51.2	51.7	191	26.2		73.8		-0.16	0.73
	243.5	S	52.1	67.1	380	70.0		30.0			
246.3	S	39.3	70.1	437	96.8		3.2				
248.0	S	15.6	82.0	54	70.0		30.0				
GLIWICE 19	172.0	T	19.8	35.7	373		100.0		1.65	0.11	
	174.2	L	56.6	60.7	360	49.2		50.8			
	183.2	T	42.1	51.5	359	23.7		76.3			
	187.5	L	23.4	51.5	22	77.3		22.7			
	190.0	T	82.0	27.4	334	92.5		7.5			
	195.0	T	86.4	72.2	487	100.0				2.05	
	200.0	T	61.5	25.1	316	100.0					
	210.0	T	78.8	76.0	315			100.0			
	220.0	T	67.9	12.5	340			100.0	0.70	0.25	
	222.0	T	55.4	64.2	320	1.6		98.4			
	223.0	T	49.6	46.2	317	3.5		96.5			
	227.0	T	66.5	47.1	375	30.4		69.6			
	230.0	T	54.2	69.2	469	68.4		31.6			
	237.0	T	50.6	56.0	474	66.0		34.0			
	241.0	T	45.7	27.9	379	85.0		15.0			
	245.0	T	47.9	28.1	212	18.9		81.1		-0.32	-0.12
	250.0	T	50.9	36.5	352	92.3		7.7			
	255.0	T	72.9	40.6	470	65.3		34.7			
	260.0	T	65.8	55.8	473	66.4		33.6			

	265.0	T	50.7	46.0	486	65.6		34.4		2.19	
	275.0	T	42.3	22.3	225	43.1		56.9		2.50	0.69
	285.0	T	50.9	22.6	484	62.4		37.6			
	289.0	T	15.7	51.3	403	79.4		20.6			
GLIWICE 21	190.0	L	55.1	33.1	344	100.0					
	190.7	L	68.4	12.0	320	100.0				-0.48	0.25
	195.0	L	55.2	28.2	322				100.0		
	198.0	L	59.5	23.5	435	69.9			30.1		
	201.0	T	65.9	24.8	307				100.0		
	202.2	S	64.2	47.5	354	92.1			7.9		
	206.0	S	41.9	35.2	331	100.0					
	211.0	S	56.7	63.9	492	68.9		31.1		0.60	1.54
	216.0	S	55.3	26.1	334	91.6		8.4			
	219.0	S	65.6	39.1	366	87.7		12.3		1.19	1.75
	224.3	S	54.5	31.3	208	16.3		83.7		-0.42	0.99
	228.8	S	38.6	71.4	363	83.5		16.5			
	243.0	S	63.4	54.6	307	72.3		27.7		-0.59	0.69
	248.3	S	58.4	17.4	318	67.3		32.7			
	252.7	S	51.9	19.8	282	76.2		23.8		0.17	0.98
	257.5	S	59.4	13.9	247	85.0		15.0			
	263.0	S	54.9	16.1	314	66.2		33.8		0.09	-0.29
	267.6	S	66.3	13.8	143	25.2		74.8			
	272.0	S	42.2	22.6	28	28.6		71.4			
	273.0	S	58.2	19.1	89	51.7		48.3		-1.20	-1.52
GLIWICE 24	162.0	L	34.6	37.8	346	82.4		0.3	17.3	-0.22	0.54
	163.0	T	28.3	42.5	233	99.6			0.4	1.39	0.57
	168.0	T	52.8	56.1	347	19.0			81.0	-0.28	0.26
	174.5	T	63.5	27.0	312	80.1			19.9	0.13	0.14
	182.5	T	67.0	45.0	310				100.0		
	186.4	T	77.9	38.8	307				100.0		
	189.2	T	69.0	34.1	313				100.0	0.23	0.20
	192.2	T	74.8	16.1	328				100.0	0.61	0.56
	196.0	S	53.7	48.5	367	83.7		16.3			
	197.6	S	62.7	68.7	443	70.4		29.6		-0.18	0.59
	200.0	S	55.0	41.7	244	86.9		13.1			
	202.0	S	52.7	70.1	216	97.7		2.3		-0.77	0.27
	205.0	S	51.8	29.1	358	86.9		13.1		-1.33	0.32
208.0	S	43.1	38.2	233	88.8		11.2				
PLAWNIOVICE 1	130.0	T	46.3	11.7	319	100.0				-0.73	0.46
	133.0	T	44.0	4.2	261	69.7			30.3	0.18	0.45
	139.0	S	40.4	71.4	242				100.0		
	142.0	S	51.9	23.5	330				100.0	0.76	1.55
	146.0	S	40.4	36.7	312	6.4		7.4	86.2		
	148.0	S	44.3	43.7	395	54.9		45.1			
PILCHOWICE 10	546.0	T	37.5	42.8	319	100.0					
	554.0	T	73.9	65.3	323	96.9			3.1		
	565.0	T	81.1	96.2	320	1.9			98.1		
	575.0	T	73.4	95.2	324	0.3			99.7		
	585.0	T	71.0	87.7	328	6.1			93.9		
	595.0	T	78.2	81.6	459	71.2		28.8			
	605.0	T	73.6	71.2	411	79.3		20.7			
	615.0	T	57.2	87.5	346	90.2		9.8			

	625.0	T	66.7	28.5	379	61.5		38.5			
WILCZA 1	115.0	T	78.7	63.0	361	4.4			95.6		
	116.6	T	74.2	36.9	338	97.3		2.7			
	118.5	T	82.8	36.6	236	96.6		3.4			
	124.0	T	73.5	19.8	344	91.3		8.7			
	132.0	T	79.9	53.7	446	73.1		26.9			
	135.0	T	72.4	45.6	537	56.1		43.9			
SZCZYGLÓ- WICE 16D	179.0	T	68.0	54.7	318	86.8			13.2		
	187.0	T	66.5	52.1	429	87.6			12.4		
	192.0	T	69.8	43.3	308	7.1			92.9		
	195.0	T	83.8	63.7	738	20.7			79.3		
SUMINA 2	286.0	T	19.0	42.0	205	100.0					
	297.0	T	73.1	94.8	354	64.1			35.9		
	310.0	T	48.1	28.9	79	100.0					
	315.0	T	88.9	68.6	352	8.0			92.0		
	320.0	T	83.9	86.5	345	7.2			92.8		
	325.0	T	82.3	84.0	510	94.5		4.9	0.6		
	330.0	T	59.7	69.2	336	98.8		1.2			
ŻORY 4	55.0	T	14.7	66.7	196	100.0					
	100.0	T	63.3	21.4	340	100.0					
	115.0	T	76.5	37.7	340	97.4			2.6	0.45	0.85
	130.0	T	91.7	65.5	316				100.0		
	135.0	T	58.7	58.6	331				100.0		
	140.0	T	43.9	64.0	351	93.7		6.3			
	145.0	T	81.2	84.1	383	85.1		14.9			

* – location in Figure 1; ** – T – marly clays, S – sandy clays, L – marly clays with rhodolith debris admixture